

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of:) Art Unit: 1637
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FRANCH, et al.) Examiner: CALAMITA, H.
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Serial No.: 10/549,619) Washington, D.C.
)
Filed: February 28, 2006) September 22, 2008
)
For: LIGATIONAL ENCODING OF) Docket No.: FRANCH=4A
SMALL MOLECULES)
) Confirmation No.: 8187

ELECTION WITH TRAVERSE

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S i r :

In response to the restriction requirement mailed April 21, 2008, please enter the following response.

1. In response to the requirement that applicants elect a "single additional method step", applicants elect with traverse species "c", i.e., the additional step of claim 22. If this species restriction is maintained, at least claims 1, 7, 9, 14, 15, 26, 29, 38, 39, 57, 68, 71, 74, and 91 should also be examined. None of these claims was identified in the restriction as an "additional method" species claim, and none is dependent on such a claim.

Moreover, we believe that even though claim 23 was identified as a separate species, since it is dependent on claim 22, it necessarily is limited to subject matter embraced by claim 22. Likewise claim 24 is dependent on 23.

The Examiner also identifies claims 122-123 as separate species. However, these claims, like 22, require that the template and the anti-codons be covalently linked initially and we believe there is no inconsistency between these claims and claim 22.

Consequently, we request that claims 1, 7, 9, 14, 15, 22,

23, 24, 26, 29, 38, 39, 57, 68, 71, 74, 91, 122 and 123 be examined, to the extent they read on one or more embodiments of 22, even if this restriction is maintained.

2. In response to the requirement that applicant elect a "building block", applicants elect with traverse species "c", i.e., the building block of claim 68.

If this restriction is maintained then at the very least all claims other than the unelected species claims 38 and 57, and 39 (because of its dependency on 38) should be examined. However, 38 and 57 read upon at least some embodiments of 68 and to that extent should be examined.

Claim 68 is directed to

The method of claim 1, wherein at least some building block anti-codons are ligated to the anti-codon of a neighbouring building block and/or to a template by a ligase, thereby covalently linking said building block anti-codons.

The other alleged "building block" species claims are 38 and 57.

Claim 38 is directed to:

The method of claim 1, wherein at least one of said building blocks comprise a chemical entity comprising a scaffold moiety comprising a plurality of reactive groups, and/or wherein the template is linked to a chemical entity comprising a scaffold moiety comprising a plurality of reactive groups.

We see no inconsistency between 38 and elected 68. Claim 68 requires that some building block anti-codons be covalently ligated to the anti-codons of neighboring BBs or to the template. Claim 38 relates to the relationship of the building blocks to a chemical entity comprising a scaffolding moiety. This is also true of claim 39, which is dependent on claim 38.

Claim 57 is directed to

The method of claim 1, wherein at least one building block or a subset of said plurality of building blocks are provided sequentially and/or sequentially hybridised to the template, wherein said sequentially provided

and/or hybridised building block anti-codons are ligated, and wherein chemical entities of said subset of sequentially provided building blocks react before a further subset of building blocks are provided and/or hybridised to the template.

Thus 57, requires that (1) a subset of building blocks are provided sequentially, or sequentially hybridized to the template, (2) building block anti-codons are ligated (consistent with 68), and (3) the chemical entities are reacted before the next subset of building blocks is introduced.

Hence, even if this species restriction is maintained, all pending claims should be examined to the extent they read on one or more embodiments of 68.

3. Applicants traverse both restrictions on the grounds that a generic claim linking the species is allowable. All of the cited additional method step claims (10, 12, 22, 23, 74, 78, 84, 121, 122, and 123) are directly or indirectly dependent on claim 1, and claim 1 is properly considered to be generic to these additional method steps. All of the cited building block claims (38, 57 and 68) are directly or indirectly dependent on claim 1, and claim 1 is properly considered to be generic to these building blocks. Thus, claim 1 is to be treated as a generic claim. (We don't concede that it's the only generic claim.)

This is a national stage of a PCT, so PCT unity rules apply. PCT Administrative Instructions, Annex B ("Unity of Invention"), paragraph (c) ("Independent and Dependent Claims"), subparagraph (i) states that "no problem arises in the case of a genus/species situation where the genus claim avoids the prior art".

Since the restriction includes a form PTO-892 citing Pederson, WO 02/10308, we assume that it is the PTO's position that there is an a posteriori lack of unity within the meaning of (c)(ii), i.e., that the generic claim does not avoid this prior art.

Procedurally, the restriction is improper because the

examiner has not, in the restriction, explained how Pederson anticipates or renders obvious claim 1. That is, a restriction for a posteriori lack of unity under PCT rules must provide a reasoned basis for the conclusion of a posteriori lack of unity. This is in contrast to species restriction practice under domestic rules, where the examiner can restrict first, before even searching the prior art.

In any event, the holding of a posteriori lack of unity is improper on its merits. WO 02/103008 does not disclose the step cited in claim 1 of "separating the template from one or more of the anti-codons hybridised thereto, thereby generating an at least partly single stranded identifier polynucleotide associated with a plurality of chemical entities".

The present invention makes it possible to achieve new types of reaction chemistries for templated reaction schemes. As cited on pages 2 and 3 of the specification of the application as filed, it is now possible to generate an essentially single stranded identifier polynucleotide to which a plurality of chemical entities are attached, and react said chemical entities while the identifier polynucleotide is on a single stranded form, thereby enhancing the reactive proximity of several chemical entities and thereby in turn enhance the formation of a molecule resulting from the reaction of said chemical entities. Furthermore, as the conditions for reacting the chemical entities are not limited to reaction conditions allowing hybridization of codons and anti-codons to occur, the types of reaction chemistries which can be pursued in accordance with the present invention has been increased significantly.

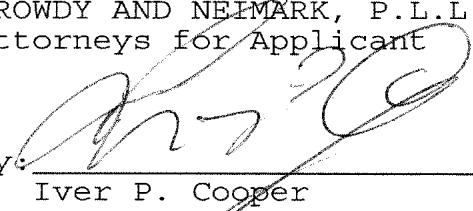
4. Applicant further traverses the species restriction to a single additional method step on the grounds that it violates the requirement of MPEP 806.04(f) that the species as defined for restriction purposes be mutually exclusive, i.e., that the species claims not overlap in scope. Claim 23 is dependent on claim 22 hence claims 22 and 23 are not mutually exclusive. Claim 123 is dependent on claim 122, hence 122 and 123 are not mutually

exclusive. And for the reasons explained in section 1, claims 122 and 123 read on at least some method embodiments comprised by elected claim 22, hence 22 is not mutually exclusive of claims 122 or 123.

5. In like manner, Applicant further traverses the species restriction to a single building block since (see section 2 above) claim 68 does not have a mutually exclusive relationship with the other identified species, 38 and 57.

Respectfully submitted,

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